

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 January 2004 (29.01.2004)

PCT

(10) International Publication Number
WO 2004/009649 A1

(51) International Patent Classification⁷: C08F 2/22,
2/24, 265/06

(21) International Application Number:
PCT/KR2003/001418

(22) International Filing Date: 18 July 2003 (18.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2002-0043129 23 July 2002 (23.07.2002) KR
10-2003-0048971 18 July 2003 (18.07.2003) KR

(71) Applicant (for all designated States except US): **KOLON INDUSTRIES INC.** [KR/KR]; 1-23, Byulyang-dong, Kwachen-city, Kyunggi-do 427-709 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Dae-Jin** [KR/KR]; Insungmaul Hyundae Apt., 102-103, Singal-ri, Kiheung-eup, Yongin-city, Kyunggi-do 449-900 (KR). **LEE, Hee-Cheong** [KR/KR]; Jeil Mansion 1-101, Jung-ri, Gusung-eup, Yongin-city, Kyunggi-do 449-916 (KR). **WANG, Guo-Jun** [CN/KR]; Jeongkwan Apt., 102-102, Mabuk-ri, Gusung-eup, Yongin-city, Kyunggi-do 449-772 (KR). **KANG, Chung-Seock** [KR/KR]; Saerunggol Apt.,

104-1503, 166, Singal-ri, Kiheung-eup, Yongin-city, Kyunggi-do 449-907 (KR). **KIM, Young-Bum** [KR/KR]; Purunmaul Apt., 102-103, Ilwonbon-dong, Kangnam-gu, Seoul 135-239 (KR).

(74) Agent: **KIM, Nung-Kyun**; K.N.K. International Patent Office, 6Fl., Taekun Bldg., 822-5, Yoksam-dong, Kangnam-gu, Seoul 135-080 (KR).

(81) Designated States (*national*): AE, AL, AM, AT, AU, BA, BG, BR, BZ, CA, CN, CO, CR, CZ, DM, EE, GD, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KZ, LK, LR, LT, LV, MN, MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SD, SE, SG, SK, SY, TJ, TR, UA, US, UZ, VN, ZA.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PREPARATION OF ACRYLIC POLYMER SOL FOR COATING

(57) Abstract: Disclosed are acrylic polymer beads and an acrylic sol composition containing the acrylic polymer beads that are used for automobile underbody floor, wheel housing, fuel tank, body panel junction and hood, door, or the like for the purpose of water tightness, vibration isolation, and anticorrosion. More specifically, the acrylic polymer beads having a core/shell structure, which are prepared by using a part of the monomer constituting a core layer to form seeds by a seed polymerization, polymerizing the rest of the monomer to form a core layer and then forming a shell layer containing an appropriate amount of a crosslink agent, have a narrow particle size distribution and thereby provide, when used in addition to a plasticizer and a filler in the preparation of an acrylic sol composition for automobile, high storage stability of the acrylic sol and excellent properties of the coating formed by gelation of the acrylic sol.



WO 2004/009649 A1